

EXHIBIT 3-2**RELATIVE LEVELS OF IRM SUPPORT BY AGENCY EXPENDITURES**

Agency	IRM Expenditures (In Millions)	Total Operating Expenditures (In Millions)	Percentage IRM Expenditures
Legislative Services Commission			
Legislative Automated Systems Division	\$ 1.60	\$ 21.40	7.48%
Judicial Branch/Administrative Office of the Courts			
Information Services Division	\$ 5.27	\$ 204.50	2.58%
Executive Branch			
Department of Administration (Includes Office of State Personnel)	\$ 2.06	\$ 48.70	4.23%
Department of Agriculture	\$ 1.31	\$ 40.10	3.27%
Department of Community Colleges	\$ 1.60	\$ 387.60	0.41%
Department of Correction	\$ 3.56	\$ 419.80	0.85%
Department of Crime Control and Public Safety	\$ 2.68	\$ 155.02	1.73%
Department of Cultural Resources	\$ 0.91	\$ 38.90	2.34%
Department of Economic and Community Development (Excludes ESC)	\$ 1.79	\$ 197.90	0.90%
Department of Environment, Health and Natural Resources	\$ 7.63	\$ 175.60	4.35%
Department of Human Resources	\$17.62	\$1,097.90	1.60%
Department of Insurance	\$ 1.38	\$ 14.70	9.39%
Department of Justice	\$ 6.15	\$ 49.10	12.53%
Department of Labor	\$ 0.16	\$ 8.30	1.93%
Department of Public Instruction (Excludes Schools)	\$ 7.82	\$ 67.78	11.54%
Department of Revenue	\$ 6.28	\$ 55.10	11.40%
Department of State Transportation	\$12.63	\$ 935.80	1.35%
Employment Security Commission	\$ 9.84	\$ 73.99	13.30%
Office of State Management and Budget	\$ 0.41	\$ 11.80	3.47%
Office of the State Auditor	\$ 0.31	\$ 13.30	2.33%
Office of State Controller (Excluding SIPS)	\$ 4.33	\$ 6.51	66.51%
Office of State Treasurer	\$ 1.25	\$ 13.32	9.38%
Secretary of State	\$ 0.44	\$ 4.08	10.78%
Executive Branch Subtotal	\$90.16	\$3,815.30	2.36%
Grand Total	\$97.03	\$4,041.20	2.40%

Sources: All Executive Branch IRM data are from the 1991 Automated Information Processing Report and Plan, Section IV - Resource Summary.

Legislative and Judicial Branch IRM data are from divisional reports.

Total staff positions are from the State's Personnel Management Information System.

Total operating expenditures are from the Annual Budget Report.

EXHIBIT 3-3**RELATIVE LEVELS OF IRM SUPPORT BY AGENCY STAFFING LEVELS**

Agency	IRM Positions	Total Staff Positions	Percentage IRM Positions
Legislative Branch			
Legislative Automated Systems Division	13	324	4.01%
Judicial Branch/Administrative Office of the Courts			
Information Services Division	63	4,505	1.40%
Executive Branch			
Department of Administration (Includes Office of State Personnel)	15	920	1.63%
Department of Agriculture	17	1,414	1.20%
Department of Community Colleges (Excludes Campuses)	16	198	8.08%
Department of Correction	28	12,849	0.22%
Department of Crime Control and Public Safety	10	2,263	0.44%
Department of Cultural Resources	4	706	0.57%
Department of Economic and Community Development (Excludes ESC)	11	735	1.50%
Department of Environment, Health and Natural Resources	45	4,145	1.09%
Department of Human Resources	142	17,735	0.80%
Department of Insurance	5	348	1.44%
Department of Justice	46	1,006	4.57%
Department of Labor	3	325	0.92%
Department of Public Instruction (Excludes Schools)	65	866	7.51%
Department of Revenue	61	1,385	4.40%
Department of State Transportation	90	13,668	0.66%
Employment Security Commission	60	2,266	2.65%
Office of State Management and Budget	6	225	2.67%
Office of the State Auditor	3	151	1.99%
Office of the State Controller (Excluding SIPS)	31	82	37.80%
Office of State Treasurer	15	241	6.22%
Secretary of State	1	114	0.88%
Executive Branch Subtotal	674	61,642	1.09%
Grand Total	750	66,471	1.13%

Sources: All Executive Branch PC data are from the 1991 Automated Information Processing Report and Plan, Section IV - Resource Summary.

Legislative and Judicial Branch IRM data are from divisional reports.

Positions are from the State's Personnel Management Information System.

Total operating expenditures are from the Annual Budget Report.

Consequently, some agencies have hired their own technical experts to help with telecommunications, LANs, relational data bases, and the like. At the agency level, the need for heavy technical expertise tends to be of limited, if substantial, duration. However, these agencies now have technical experts on permanent staff. As the needs for their expertise diminishes, there is a natural tendency for these technical experts to be drawn into other, less technical roles. At the same time, there are likely to be appropriate needs for their expertise at other agencies. The result is that the State suffers on both sides of this situation: it has highly skilled employees who are being underutilized, and it has unsatisfied needs for some of those same skills.

Recommendation -- Organize technical experts centrally to share transferable skills across agencies.

These technical resources should be organized to satisfy two different kinds of needs, problem resolution and project support.

Technical problem resolution refers to short term assignments usually of several days duration. These assignments should be addressed by a centralized technical staff provided through SIPS' Technical Support functions both for computing and telecommunications. This will require SIPS to increase the scope and depth of its technical staff.

Technical project support refers to longer term assignments. It should be addressed through the creation of a centralized consulting function in the IRM Office. This group would provide:

- Broad technical expertise
- Project management expertise
- Skills applicable to any agency
- Long term support as part of the agency's full-time on-site project team
- Project managers, systems analysts, technical designers and developers

The agency would retain responsibility for providing permanent staff with agency-specific program expertise to perform business analysis and system maintenance programming. These agency-resident IRM staff, including the IRM manager, should have a secondary reporting relationship to the Deputy Controller for IRM. The agency would also retain the authority to contract competitively with qualified vendors to provide necessary technical expertise and support, either in addition to or instead of using SIPS and IRM Office consulting resources.

Agency technical staff should be allowed either to request transfer or temporary (perhaps 6 to 24 months) assignment to the SIPS or IRM Office support groups. This approach would

extend the opportunity to both the State and the individuals to leverage the capability of the technical experts already on agency payrolls. The temporary, rotational assignment could be handled under the State's existing personnel policies.

Finding 14 -- Personal computer (PC) usage among the agencies is at a modest overall level. However, PC cost, distribution, and utilization are not well controlled.

Personal computers are an issue because the General Assembly perceives that the agencies are overbuying and underutilizing them.

In 1991, the General Assembly determined that the State had spent approximately \$60 million on PCs in the prior year, but could not allocate the expenditures to individual cost centers. The Automated Information Processing Report and Plan for 1991 versus 1992 indicates that the executive branch agencies collectively purchased approximately 1,500 PCs, which conservatively would account for no more than \$10 million. Presumably, the large remainder of PCs were purchased by schools and universities. Exhibit 3-4 compares the agencies in terms of their respective ratios of total staff to number of PCs. The executive branch ratio is approximately 8 to 1. Even adjusting for 24,000 computer terminals, the ratio is still greater than 5 to 1, which appears reasonable.

Regarding the usage of PCs, the Department of State Transportation Data Center Services Division made a major PC purchase in 1991 that raised significant issues. There were open questions whether the division might have:

- Overpaid approximately \$500,000 for PCs with a proprietary technology that was not clearly required for the intended usage
- Achieved a ratio, including PCs previously purchased, of approximately 0.5 staff to 1 PC (i.e., 2 PCs per person) in the division
- Acquired several extra PCs in the transaction to hold in inventory for future use.

Consequently, there is foundation for the General Assembly's concern. The General Assembly is also concerned that PCs go to certain desks for status, not usage, and that many are underutilized because the users are not trained.

Recommendation -- Require an agency to submit its PC utilization plan to the IRM Office as a precondition for authorizing the purchase of PCs.

Clearly, the State needs to obtain maximum value in the purchase of PCs and effective utilization of them through appropriate distribution to well-trained users. To achieve that goal, an agency needs to assess the needs to be addressed with the PCs and to plan for their installation and user training. Each agency should submit a PC utilization plan to the IRM Office along with its purchase request. The agency should also follow up with periodic

EXHIBIT 3-4**RATIO OF STAFF TO PERSONAL COMPUTERS BY AGENCY**

Agency	Total Staff Positions	Total Personal Computers	Ratio of Staff to PCs
Legislative Branch			
Legislative Automated Systems Division	324	21	15.43
Judicial Branch/Administrative Office of the Courts			
Information Services Division	4,505	589	7.65
Executive Branch			
Department of Administration (Includes Office of State Personnel)	920	154	5.97
Department of Agriculture	1,414	303	4.67
Department of Community Colleges	198	15	13.20
Department of Correction	12,849	750	17.13
Department of Crime Control and Public Safety	2,263	186	12.17
Department of Cultural Resources	706	249	2.84
Department of Economic and Community Development	735	273	2.69
Department of Environment, Health and Natural Resources	4,145	910	4.55
Department of Human Resources	17,735	1,641	10.81
Department of Insurance	348	220	1.58
Department of Justice	1,006	150	6.71
Department of Labor	325	54	6.02
Department of Public Instruction	866	568	1.52
Department of Revenue	1,385	210	6.60
Department of State Transportation	13,668	1,580	8.65
Employment Security Commission	2,266	391	5.80
Office of State Management and Budget	225	25	9.00
Office of the State Auditor	151	89	1.70
Office of State Controller (Excluding SIPS)	82	63	1.30
Office of State Treasurer	241	71	3.39
Secretary of State	114	35	3.26
Executive Branch Subtotal	61,462	7,937	7.74
Grand Total	66,471	8,547	7.78
<p>Sources: All Executive Branch PC data are from the 1991 Automated Information Processing Report and Plan, Section IV - Resource Summary.</p> <p>Legislative and Judicial Branch PC data are from divisional reports.</p> <p>Positions are from the State's Personnel Management Information System.</p>			

reports on PC usage and delivery of user training as a precondition for further PC purchases.

Finding 15 -- Agencies often fail to use the competitive process to procure cost-effective solutions to their information technology needs.

The State has failed to take consistent advantage of marketplace competition. For example:

- Agencies commonly sole-source the acquisitions of hardware directly to the industry's leading vendors (i.e., IBM, AT&T). For example, some IRM divisions have stated that **only** IBM PCs may be procured. The reason most often given for this decision is the higher reliability and better service provided by these vendors. However, in the area of PCs this is no longer valid. The May 1992 issue of PC Magazine, a leading PC technical and trade publication, identified that user satisfaction and component reliability for a number of well established PC-compatible manufacturers (e.g., Dell, AST, ZEROS, Gateway, Northgate) were equal to or better than IBM's rating.

Directed acquisition provides no incentive for the vendor in question to provide discounts. As a result, the State pays more than it might under a competitive procurement.

- The Contracts and Purchase Division has failed to provide a convenient and flexible procurement vehicle to enable State agencies to acquire popular PC, office automation, and LAN components at lower than market prices. The old PC term contract was canceled without notice, and no alternative mechanism put in place. Even when in effect, the old contract did not provide the level of cost savings possible if a fully competitive request for proposal (RFP) had been issued for PCs within the State. Experience in the federal sector has shown that savings up to 30 percent to 40 percent off list can be obtained through fully competitive acquisitions.

As a result, agencies have only two choices: pay market prices to vendors or computer stores, or enter the lengthy procurement cycle to establish their own competitive procurement contracts.

- Most PC software packages in the State are procured on an individual copy basis. With few notable exceptions (e.g., virus detection software, Andersen's FOUNDATION Tools) the State has not attempted to use its purchasing power to negotiate discounts and service agreements for software packages (e.g., word processing, spreadsheets, data bases, etc). In agencies that have, or are migrating toward, LAN environments, few have investigated the cost saving that could be obtained by moving from individual work station licenses to LAN server licenses.

Recommendation -- Eliminate directed sole-source procurements, and establish a statewide standard for competitive procurement of technology products.

- SIPS, in conjunction with the Purchase and Contracts Division, should initiate a fully competitive RFP to establish a multi-vendor convenience contract for PC, Office Automation, and LAN-based components.

The procurement should specify functional and performance requirements as well as industry standards (e.g., EISA, SCSI II, VGA) to be met for a wide range of PC and LAN components. The scope of the contract should also include on-site maintenance for these components anywhere in the State. The contract award should be made to two or more vendors based upon the most advantageous bids, costs and other factors considered. The contract should be for one year with multiple option years, provided the vendor has provided adequate service, the products have remained current and state-of-the-art, and the prices have remained advantageous to the State.

The contract should include a "technology refreshment" clause that would allow the vendors to propose newer technology to replace the originally bid technology as long as the price and performance advantage equaled or were better than that offered in the original contract.

- State agencies should immediately stop directed sole-source procurement for IBM PCs and instead evaluate the cost-effectiveness of available PC-compatible offerings. The State Auditor should initiate a review of agency procurement practices to ensure that such cost-effective analysis has been performed and used in the procurement of PCs.
- The Purchase and Contracts Division should require that all mainframe component procurements over \$25,000 or upgrades 15 percent or more above the original purchase price of the existing configuration be of a compatibility-limited competitive nature.
- SIPS should initiate negotiations with popular software package manufacturers or their distributors to receive more favorable prices and improved support.
- Agencies migrating to a LAN environment should investigate the implementation of LAN server licenses instead of individual work station licenses.

Finding 16 -- There is a lack of adequate and consistent IRM policies, procedures, and standards among the agencies.

Review of the individual agency IRM functions indicated that all agencies had outdated and inadequate IRM policies, procedures, and standards. Most agencies were in the process of planning for updating these documents, although no agency had yet made much progress.